

# COMPETITIVE INTELLIGENCE NETWORKS FOR HIGHER EDUCATION

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## Abstract

Universities as organizations live together in an environment that conditions them to change and progress. Adapting and being able to react to changes is a need and a challenge at the same time. Thus, the EHEA implies for the university world a reshuffling in the rules of the game that together with the increasing interrelation with the job market, and the higher level of competitiveness, drives universities towards the need of having some mechanisms in the detection of change. This is being done for years in the entrepreneurial tissue, Competitive Intelligence (CI); as an evolving tool that is immersed in its usual operation, can help universities in their adaptation. CI is understood as the process of searching, selection, analysis and diffusion of information regarding those elements of the environment that can affect an organization and where the resulting product becomes useful knowledge as a back-up in decision-making and strategic planning.

One of the instruments most employed in CI in the obtaining of strategically valuable information is the network of relationships and contacts of the organization and their members. Thus, Social Capital constitutes an important instrument of information exchange and can become an important resource for organizations. Social Capital is configured as an important factor in IC processes.

In this report, the importance of Social Capital, and the networks of relationships is shown, as a valuable resource for universities in the processes of CI in order to adapt to the changes of the environment. In particular, it is proposed as a valuable tool in the design and adaptation of the catalog of qualifications of a university.

## Keywords

EHEA, Social Capital, Competitive Intelligence, Universities

## 1. INTRODUCTION

Organizations, of any type are linked to a specific environment. This environment interoperates in a constant way with the organization, which has to make an effort to watch changes in order to become more able to adapt themselves for their survival and competitiveness.

This dynamism of the environment can have an impact, whether it is negative or positive, for the organizations that want to be competitive. Therefore, organizations have to be capable of detecting opportunities and threats, to adapt themselves and to react fast to external changes. Potentially, this detection of changes in the environment for the correct management of the change, it is necessary that it is produced of a proactive form and be anticipated as far as possible. At present, it is considered crucial to create a systematic process of scanning of the environment and analysis of external information in order to provide support to the decision-making processes. This process is known with the name of Competitive Intelligence (CI, from now on).

CI, which for a long time were associated with private company's is worthwhile for every type of organization, for example for the Public Administration when designing policies and reacting in the

face of social phenomena, and in the case of NGO's when turning to projects and campaigns, and, also, the educational institutions when designing their catalogs of educational products.

This report deals with these questions related, especially, to a very concrete type of organization: the university. It receives pressure from the environment for change in its economic, social nature, as well as in the need of competitiveness. If in this panorama we also take into account also the rules of the new European Higher Education Area (EHEA, from now on), motor of change of the European University at the beginning of the 21st century, it is clear that we find ourselves in a moment in which the university world is being forced to make a reconsideration of its functioning and the need of a change of mentality and, also, in its management and structuring.

Given all of this, the challenges that the university faces produces that in recent times, the incorporation of traditional tools, into its management structure, associated with the entrepreneurial tissue has been huge, and among which, CI has to be highlighted.

In CI, an important part of the theoretical analysis is related to information acquisition and analysis processes and their connection with the Social Capital concept, and in particular, with the type of resources and information that can be obtained from a specific network of relationships and its impact on the process of decision-making and innovation.

In that sense, in the knowledge based economy, the capacity and potential to generate new ideas, process and products is essential, together with the transferring of them for the benefit of social and economic development. So, nowadays the knowledge generated by external resources is a very key factor in the innovation process, and therefore, the knowledge networks are more and more important for organizations to achieve their goals (Chesbrough, 2003).

Thus, this report focuses on the potential of the introduction of competitive intelligence at universities. In particular, we will see how Social Capital, its knowledge and its exploitation can happen to be an important part in CI, and therefore, to contribute to the process of decision making and adaptation of universities to the environment.

## **2. UNIVERSITIES IN THE FACE OF THE CHANGES OF THE ENVIRONMENT: THE EHEA AS A STRONG MOTOR OF THE CHANGE**

One of the challenges of the universities is to attain excellence. A form of doing it is stimulating the competitiveness between them and their specialization. The European Board of Lisbon (2000) has as its aim that Europe needs excellence in their universities to become a more competitive and dynamic economy, based on knowledge, with the capacity to sustain economic growth and to create quality jobs that guarantee social cohesion.

At the same time, the Commission of the European Communities (2003) has as its aim that universities, on the one hand, have to contribute in a more suitable way towards the local and regional needs and strategies. On the other hand, they have to establish a much narrower collaboration with the entrepreneurial tissue to guarantee a more suitable level of exploitation and creation of new knowledge that the economy and the company require.

Therefore, two of the up-to-date goals of the universities consist in:

- Guaranteeing a senior level of convergence with the university courses and the demands of the job market.
- Reinforcing the contribution of the University to local and regional development.

The legislative environment and the political framework constitute a motor of change for Universities in order to consider their functioning and as a response to the best way in this process. In this sense, the EHEA, with its several declarations and milestones, provides universities with the opportunity to use this process of theoretical harmonization in order to position themselves in the best possible way in the

environment. On the other hand, one of the key principles of the EHEA is the adaptation of the degrees to what companies and society demand, the job market and the promotion of practices in business organizations. In this sense, the importance of scanning market trends and the environment is clear, in order to describe suitable degrees and guarantee proactive developments of the same ones. Furthermore, the change of conception and orientation of the focus of the qualifications and the programs directed at the paradigm of the learning centered on the student, has to allow, in theory, that new graduates come out with some better capacities of adaptation to new environments and to continuous professional recycling.

In particular, with respect to the Spanish State, the official decrees that regulate the titles of degree and of postgraduate courses create a training of first cycle (degree) that it has as its goal to achieve the education of the students to integrate directly into the job market with a appropriate professional qualification and that is complemented with an advanced education in the second cycle (postgraduate course) that they have as their aim the specialization of the student in their academic training, whether this is professional or scientific. In this sense, is crucial the dialog between the university and part of its environment is crucial, among them the agents of the job market, so as to identify and to describe the professional competences that the society needs.

As we have stated, universities as like nearly all organizations, work in a dynamic environment and are in constant evolution. Every time, thus, many of them see themselves to place in any of the following aspects (Cobarsí, 2005) harried to achieve: the catchment of students, the catchment of talent (researchers and teachers), and the search of attraction of the interest of other external agents or the creation of answers to the appearance of new social and economic needs. Furthermore, the current trend of the assigned economic endowments of the universities is carried out on the basis of criteria of competitiveness. In the Declaration of Glasgow of 2005, the universities have to commit themselves to study models of public/private funding and on improving their structures of government and leadership.

Because of this, it is necessary that universities count on structures and models of management that are more effective and professional. In the same declaration, the need of cooperation and interrelation among universities is advocated for. In this sense, the interdependence of the universities with their environment, held by the interorganizational theory, brings about the need that these identify the binding agents in their network and analyze the possible forms of collaborating with these, that is to maximize its value and it is important to stimulate the cooperation as one element more of competitiveness (Peltoniemi i Vuori, 2005).

Of all this, it becomes very important that the universities have to implement professional strategies of management that allow them to face the changes of the environment, and, at the same time, to establish or to strengthen their relationships with the external agents. All these challenges are particularly delicate for the university organizations, since the current institutions of upper organization, as Bates affirms, historical stages with more stable environments than the current ones (Housecoats, 2000), so the need to adapt to external changes are less imperative.

Besides, it is necessary to take into account that the EHEA implies other variables of environment change like the mobility of the students, that together with economic (decrease of the public aid for students) and demographic (demographic decrease of students) factors and the demands of the job market added to the duty of universities to contribute to the development of their nearby geographical environment.

In this context, it is necessary to bring to light the importance of the relationships of the University with the external agents and the mechanisms of management that uses the University to correlate with its environment and to explore it, since this relationship can be a critical point for the survival of higher education institutions.

Once this analysis was completed, we will next deal with the application of the techniques and processes that are typical of the CI at Universities, and of the important role that the Social Capital of the universities can play in this process.

### **3. COMPETITIVE INTELLIGENCE AS A TOOL OF SUPPORT IN PROCESSES OF DECISION MAKING**

As stated in the first section, the uncertainty and the dynamism of the environment can strike any organization negatively. In spite of that, this impact if it is correctly managed can be positive. To adapt oneself and to fit to the competitive environment is one of the main functions of an organization, and to do it, it is necessary to establish a systematic process of observation and analysis of the environment that gives support to the process of decision making strategies (Rajaniemi, 2007). This process is called Competitive Intelligence (CI) and consists in managing suitably the external information in the organization to detect and to analyze facts that they can have effects on the development and competitiveness of the same one, with the goal to serve as a support to the process of decision making. CI is understood as a process, as long as it consists of some concrete phases and it follows a series of models; as a function, as long as a form of management is considered in the service of the strategic planning and the decision making; and as a product, as the result of the process that is followed is an analyzed part of the information that can be presented in different formats and forms. So the main goal of these three components is to obtain or generate actionable knowledge.

Throughout time, several models which gauge the phases of competitive intelligence cycle have kept on turning up. In a general way, we can highlight four phases: a) Identification of critical factors of surveillance, that is, to specify the elements of the environment that are endeavored to be observed. These factors will go from the needs of information, often the managers information. In this phase, they are focused on the efforts and orientation of the posterior stages; b) Search and acquisition of this information, using different sources and resources; c) Analysis of the information obtained, converting it into products of added value from which tactical and strategic decisions can be taken; and d) Communication and diffusion of the analyzed information to those individuals who have the responsibility of acting from the obtained results.

As we have noted, the action based on analyzed information is the result of the process and without action, there is not intelligence. As a step previous to the action, there is the phase of creation of meaning where aspects like the confidence in the obtained information has a determining role in the process.

A system of CI has to be focused on the implications of the market changes and of the environment in relation to current and future strategies of the organization. CI can be proactive or reactive. It is reactive when the systems of search and analyses of information activate to solve a prompt problem and is proactive when it has an exploratory orientation and the processes of catchment, analysis and treatment of the information are carried out in systematic way allowing the making of changes in the current strategy of the organizations, with a marked anticipatory philosophy. The proactive intelligence recognizes that the absence of change events does not assure an absence of competitive threats and therefore, is directed at the detection of weak signals. A weak signal has to be understood as a piece of isolated information that can be considered as evidence that something is happening, or can happen, and about which it is necessary to pay attention. The weak signals can separately have little meaning, but when detached from a process of analyses, a set of weak signals keeps on acquiring meaning.

From these premises, and of the incorporation of entrepreneurial models as a reference of management in public organizations, university qualifications can be perceived as products and the universities like the organizations that put them at the disposal of the market. Therefore, in this context, and in a process quite a lot shakier than the environment and the university reality, as it in the adaptation to the EHEA, it is evident that the universities can configure a series of techniques of CI, of a reactive type, and that once forged they could happen to be proactive. These techniques are one of the tools that can be used by the universities to face the afore-mentioned challenges: adequacy of the formative offer to the demands of the market and the contribution of the university to local and regional development.

It is important, however, not to confuse a process of benchmarking with a more complex process like that of the CI. Benchmarking is a process accepted in the companies that consists in identifying the best practices carried out by competitor companies, with the goal to offer a framework of reference for estimating the situation of the company in relation to its competitor. On the one hand, CI is a process,

inscribed in the set of clear-cut formal and informal systems for an organization to manage the internal and external information, as well as the mechanisms of communication used to spread it and that CI goes beyond the detection of best practices since a vast range of elements of the environment takes into account that they can affect the achievement of the goals of the organization (legislative aspects, demographic trends, etc, technological advances).

In spite of the creation of these systems, information arrives at the organizations from ways that have not been thought up initially as instruments of acquisition of information. In this sense, different research stresses the importance of the social networks as a facilitator element of the CI process to identify valuable strategic information. Precisely, the repercussion of the social networks has been studied in the processes of CI (Jaworski et al., 2002) as an element that contributes to the improvement of the processes of knowledge acquisition. And as Mabroukiu (2007) notes, CI has to take in account the social and cultural dimension of information flows. Regarding universities, in a study about the needs of information of the heads of department of English universities, it is also ascertained that a determining factor for the management of strategic information was the network of relationships and contacts, internal as well as external to the university and with different degrees of formalization (Huotari i Wilson, 2001).

#### **4. COMPETITIVE INTELLIGENCE AT UNIVERSITIES**

The practice of CI is usual in companies, mainly the Anglo-Saxon, Japanese, French and German ones, and their importance and utility as a tool that contributes to strategic planning (Bergeron, 2002) has kept on being ascertained. CI was initially applied to technological companies and was focused on in a basic way in the surveillance of technologies, that is, on making a follow-up of the evolution of the science and the technology in a specific field, to detect emerging applications, trends, partners and potential competitors, inventions, etc. The goal was to give support to the elaboration of plans and technological strategies. Later, the goals of the surveillance including all those aspects of the environment that could affect the development of the business as elements of observation and analysis were broadened. Recently techniques of CI in the management of public organizations are starting to be applied. Thus, determinate governments, especially in the Francophone area, use CI as a political tool and of management, either to develop regional strategies or to give support to the entrepreneurial tissue of the country.

In the case of the Spanish State, there are Observatories focused on the obtaining of information of the environment for local level decision-making. Likewise, the existence of regional organizations directed at giving support to the SME's in subjects of CI, innovation or technological surveillance, ascertain the importance of this discipline (like the example of the service Zaintek<sup>[1]</sup> in the Basque Country).

In the area of the Universities, CI has been used, mainly, to analyze the university-company relationship from the prospect of the transfer from technology and of knowledge. Thus, for example, the Laboratorio de Análisis y Evaluación del Cambio Técnico, of the Universidad Carlos III of Madrid, the importance to apply CI in the planning of R+D on behalf of public organizations of research highlights that they need to fix priorities for their programs of research and to evaluate results (Modrego, 2007). Even so, little work has been focused on investigating the application of techniques of CI as a factor to favor the competitiveness of the universities in relation to their training offer. It is necessary to consider that their need in a research about the competitiveness of the Galician universities from an analysis depending on the variables of the offer and the demand of the set of qualifications mentions offers in Galicia (Fernández *et al.*, 2005).

In this line, there is a study carried out in Chinese universities (Liu i Oppenheim, 2006) where it is brought to light that the theory and methods of CI are an excellent support for the development of the competitive strategies of the universities in the current society. It has also been argued that the importance to apply techniques of CI in the process of strategic planning of the universities in the Annual Lecture of the Indiana Association for Institutional Research (Cronin, 2006).

It is evident that the Universities in some way or another, in a more structured or more informal way, makes some process of CI in decision-making: for example, they want to inform which qualifications to

offer. In this context, the introduction to Universities of the process of intelligence and the implication of the social networks in the obtaining of weak signals as a tool of management have to be contemplated to face the afore-mentioned challenges.

## **5. SOCIAL CAPITAL**

Before working on the role of Social Capital in the processes of CI, it is necessary for us to make a brief note about the Intellectual Capital (IC). This concept has been used, recently, for explaining the organizations innovation and value creating process. IC makes reference to the intangible assets that generate value for the organizations: knowledge of the people, relations with other organizations, recognition on the part of the company, among others (Edvinsson i Malone, 1997).

The study of the intellectual capital at universities has been analyzed, in a basic way, from the standpoint of research and transfer of knowledge and, in an incipient way, in the elaboration of instruments to measure it and to manage it. We can quote for example, the reports about intellectual capital of *the Austrian Research Center (ARCH)* and of the *Higher Education Institutions and Research Organizations (HEROs)*. In the context of the Spanish universities, the model *Intelec* highlights intellectual leadership for the Autonomous University of Madrid, also from the point of view of the investigative function of the University. In any case, the former models do not usually apply to the analysis of the educational aspect of the university and have a markedly economic orientation

Another vision about the intellectual capital is given by Nahapiet and Ghoshal (1998). In Accordance with them, intellectual capital makes reference to the knowledge and the capacity of knowledge of a collective and represents a very valuable resource for the action based on knowledge. Social Capital can origin intellectual capital from determinate processes of combination and exchange.

The central idea about the theory of the Social Capital is that the networks of relationships constitute a very valuable resource to foster specific social or collective actions ahead. Social Capital, following the mentioned authors, is understood as the set of current and potential resources included in a network, disposable through the same one and derivatives of the network of relationships of a person or social unit.

These authors consider that the Social Capital includes the network as well as the assets that can be mobilized through the net and portray themselves three dimensions: a) structural dimension: that reference to the configuration of the network and the type of links makes that there are, b) relational dimension: it makes reference to the assets created through a series of interactions and relationships. The type of relationship influences the behavior and decisions of the actors and they have to take into account aspects like: confidence, rules and sanctions, duties and expectations and identification, and c) cognitive dimension which refer to the resources that provide visions and shared representations and the creation of meaning, this dimension includes: narratives, and languages and shared codes.

## **6. THE ANALYSIS OF SOCIAL CAPITAL AS A PART OF COMPETITIVE INTELLIGENCE**

When studying the role of the Social Capital in the process of CI the vision of Nahapiet i Ghoshal provide us with a suitable framework of analysis. On the one hand, it has provided (given) that social networks constitute a valuable instrument for obtaining strategic information. On the other hand, which is the final result of CI, is action based on analyzed information, where the phase of meaning creation is a very important aspect. Paying attention to premises, the dimensions that they portray about the Social Capital constitute a suitable framework to identify and to study the social networks of the universities to capture strategic information.

Which informational benefits are derived from social capital? According to Nahapiet and Ghoshal, social capital increases the effectiveness of action so the social relationships have an effect on information transfer and dissemination. On the other hand, social capital reduces the efforts of the monitoring and scanning process so the social network reduced the time to access to a specific piece of informatio.

For the analysis of how some of the three dimensions of social capital could affect or influence the IC process, the following aspects are brought up by us. In the first place, within the several factors that affect the efficiency of CI (Jaworski et al., 2002), is important to stress those related with: a) the extensiveness of the network, the reciprocity and knowledge use, b) the richness, divergence and information value of the information environment. In second place, it would be interesting to take into account the comprehensiveness, timeliness, accuracy and efficiency included in the search and acquisition process of CI. And thirdly, it would be needed to consider the importance of the social dimension of information flows and the sense making process in CI (Mabrouki, 2007).

## 7. CONCLUSIONS

The social, informal or formal contacts play a very important role in the obtaining of information, whether they are either internal or external, and are necessary in the process of adaptation to any change. In this sense, the analysis of Social Capital that derives from these contacts and networks, applies as a methodology of the strategic management of information, in order to understand in depth the corporative informational behavior and of the different actors that intervene in the process of obtaining, analyses and application of strategic information.

The Universities, at present, in their process of adaptation to the EHEA, need to be very alert of the changes and movements of their environment, so many regarding social, demographic factors, legislative or economic, like regarding the movements of the competence, like other universities or institutions that offer substitutive products.

The definition of a process of intelligence of the universities and the integration of Social Capital into this process, as an information source to detect and to analyze weak signals that the environment transmits is configured as one of the keys to adapt the strategies and formative offers of universities to the environment as we have described.

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